ALBERTA WATER COUNCIL

JANUARY 2008

water for life

recommendations for renewal

Contents

Executive Summary 1

Introduction 4

Context: The First Four Years 5

Renewal Engagement Process 7

Key Themes 8

Recommendations 11

Renewal and Resourcing 18

Conclusion 19

Appendix A

What We Heard 23

Appendix B

Members of the Alberta Water Council 35

Renewal Project Steering Committee 36

Renewal Project Team 36

Executive Summary

In December 2006 Premier Ed Stelmach mandated the Minister of Environment, the Honourable Rob Renner, to renew and resource the ***Water for Life*** strategy. In turn, in early 2007, the Minister asked the Alberta Water Council to provide him with recommendations regarding how to re-energize and re-focus the ***Water for Life*** strategy.

The Council has twice reviewed the advancement of the short term goals of the ***Water for Life*** strategy since it was unveiled in 2003, and specifically, the Council used its ***2006 Review Report*** as the foundation for the renewal of the ***Water for Life*** strategy.

Given the importance of reviewing and renewing the strategy, the Council felt that it was critical to engage ***Water for Life*** strategy partners to learn how they felt the strategy could be improved. Input was solicited from the sectors represented at the Council table, as well as the general public in order to strengthen and affirm the Council's renewal directions.

The ***Water for Life*** strategy directs that its goals and objectives will be achieved through partnerships. Part of the vision of renewal is to re-energize the ***Water for Life*** partners to continue to build commitment to reaching the strategy's goals.

Key Themes

After gathering input and carefully considering the Council's ***2006 Review Report***, it became clear that the three goals and three key directions of the ***Water for Life*** strategy continue to be valid. However, it is increasingly apparent that the three goals and three key directions are heavily interconnected. Failure to make progress on any one goal or direction will increasingly impact our ability to advance the other goals and directions.

Many of the recommendations found in this report are not directly linked to any one of the strategy's original goals or directions because the recommendations each impact several goals and directions. Instead, the

recommendations are grouped according to two key themes that emerged from public and stakeholder input:

- Safeguard Our Water Sources
- Accelerate Action

Given that the *Water for Life* strategy's three goals and three key directions remain valid, these key themes and their supporting recommendations are intended to advance and energize the implementation of the *Water for Life* strategy, as a whole.

Recommendations

Based on the two key themes, the Council developed the following recommendations to guide the Government of Alberta in renewing the strategy with the understanding that an implementation plan, including specific actions, will be developed following a review of the renewal recommendations.

Safeguard Our Water Sources:

- Address aquatic ecosystem degradation.
- Integrate water and land management.
- Create, enhance and use innovative tools and best practices.

Accelerate Action:

- Clarify roles, responsibilities and accountabilities.
- Enhance data collection, analysis and reporting.
- Expand public awareness programs and build shared commitment.

Renewal and Resourcing

The Government of Alberta should focus their attention and resources on the key areas identified in this document to ensure resources are in place to achieve them and that the strategy, as a whole, can advance. Focusing resources and putting true 'muscle' in a few strategic areas will most effectively advance the strategy as a whole.

Conclusion

In conclusion, the Council found the actions under the *Water for Life* strategy are evolving from short-term, foundational work into longer-term, strategic initiatives.

As a result, there is an opportunity for these initiatives to be bold and truly innovative.

The Council believes a renewal of the strategy is timely, and with concerted effort to Alberta's water sources and accelerate action in some key areas, the Government of Alberta and its partners can realistically fulfill the following vision, as stated in the Council's *2006 Review Report*:

> ***"Alberta has an opportunity to transform its water management challenges into world class solutions. The strategy envisions policies and resources far beyond ad hoc decisions and incremental change. . . . (however) success will depend on focus, innovation, balanced social values and a growing appreciation of the value of water as a scarce resource."***

Introduction

In December 2006 Premier Stelmach mandated the Minister of Environment, the Honourable Rob Renner, to renew and resource the ***Water for Life*** strategy. In turn, the Minister asked the Alberta Water Council to provide him with recommendations regarding how to re-energize and re-focus the ***Water for Life*** strategy.

In accepting the challenge, the Council undertook a process to develop recommendations aimed at ensuring the provincial water strategy remains focused and relevant.

This renewal process for ***Water for Life*** is not intended to replace the original strategy, but rather involves an evaluation and adjustment to ensure it is responding to changing provincial circumstances.

The recommendations that follow are intended to re-focus ***Water for Life*** at the strategic level and provide the Government of Alberta with guidance regarding the next steps of resourcing the future implementation of the strategy. It is expected that resources will be focused on the themes and recommendations put forward in this report in order to most effectively advance the strategy as a whole.

The recommendations provide a strategic direction to renew the strategy with the understanding that an implementation plan, including specific actions, will be developed following a review of the renewal recommendations.

This renewal has been completed in hopes of ensuring the strategy's continued success and implementation.

This report is intended to re-focus Water for Life at the strategic level. It is expected that future resources will be focused on the themes and recommendations put forward in this report in order to most effectively advance the strategy as a whole.

Context: The First Four Years

The Alberta Water Council has twice reviewed the advancement of the short-term goals of the ***Water for Life*** strategy since it was released in 2003.

The Council's most recent review report, in 2006, recognizes that progress towards the strategy's three goals has not been balanced, or equal, during the first four years of implementation. Specifically, the ***2006 Review Report*** notes:

- Of the three goals of the ***Water for Life*** strategy, the most progress has been made towards the goal of ***Safe, Secure Drinking Water***. This goal was initially the top priority of the strategy, since it directly affected the health of Albertans. As a result, good progress has been made toward achieving it.
- Reaching the goal of ***Reliable, Quality Water Supplies*** is also generally on track after four years of implementation. However, due to the reality of limited water supplies in southern Alberta and the risk of future droughts we must remain vigilant so we can continue to meet the growing social and economic demands for reliable water supplies in Alberta.
- During the first four years of implementation, less emphasis has been placed on achieving the goal of ***Healthy Aquatic Ecosystems*** and as a result, it is behind schedule.

Goals

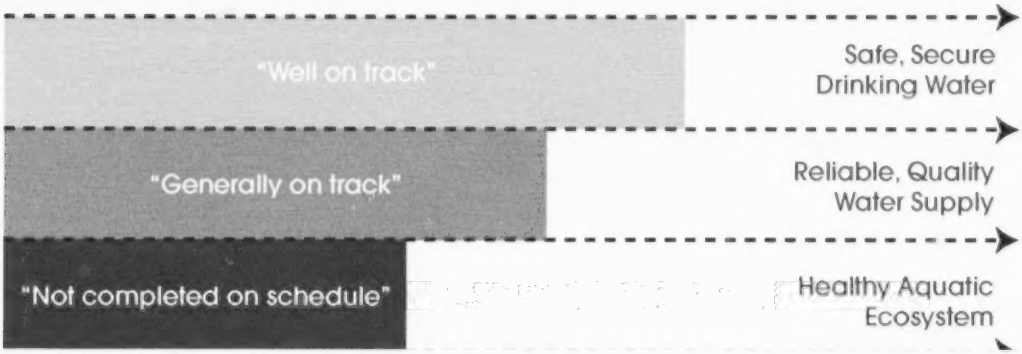


FIGURE 1 The Council's view of progress toward the three ***Water for Life*** goals. Good progress has been made toward achieving ***Safe, Secure Drinking Water*** and ***Reliable, Quality Water Supplies***. However, progress toward ***Healthy Aquatic Ecosystems*** is behind schedule.

The Council also recognizes that progress in ***Water for Life's*** three key directions has been unequal.

- The key direction of ***Knowledge and Research*** has made excellent progress to date. The Government of Alberta has committed over $30 million to enhancing local water-related research and has established the Alberta Water Research Institute to oversee it. Gaps, however, still remain in sharing information and translating data and research into useful information for land and water managers.
- An effective foundation has been built in the area of ***Partnerships***. Active partnerships now include the Alberta Water Council, eight Watershed Planning and Advisory Councils, and over 140 Watershed Stewardship Groups. The foundation has been built for shared action and many ***Water for Life*** partners are ready to act on what has been learned during the first four years of implementation. Improvement, however, is needed in clarifying the roles, responsibilities and accountabilities of the ***Water for Life*** partners.
- There have been several good examples of water conservation in Alberta over the past twenty years, however, due to its broad scope, overall progress toward the short term actions in the key direction of ***Conservation*** remains behind schedule. But, progress is being made. The complexity of changing the attitudes of Albertans from a perception of water abundance to one of limited water supplies has restricted progress in this direction.

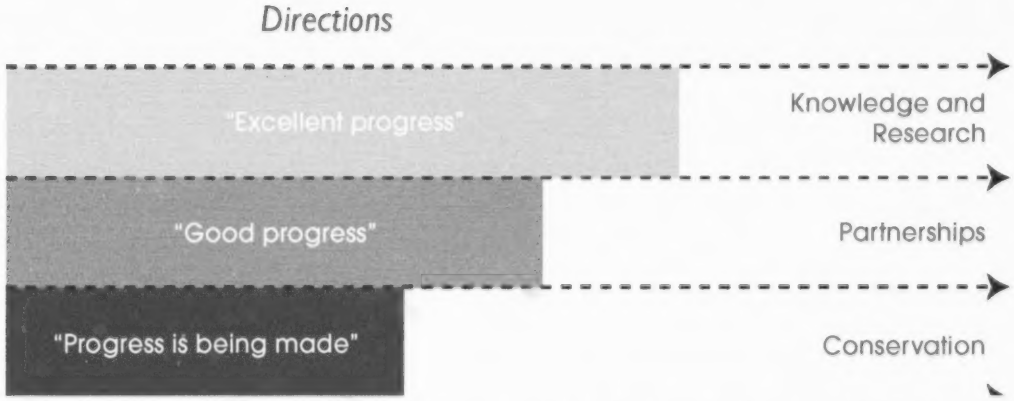


FIGURE 2 The Council's view of progress in ***Water for Life's*** three key directions. Good progress has been made toward improving provincial ***Knowledge and Research*** and establishing ***Partnerships.*** Progress toward ***Conservation*** has been slow.

Renewal Engagement Process

The Alberta Water Council used its ***2006 Review Report*** as the foundation for the renewal of the ***Water for Life*** strategy.

Given the importance of the task, the Council felt that it was critical to engage the ***Water for Life*** strategy partners to learn how they felt the strategy could be improved.

To facilitate this, the Council created the ***Renewal Workbook*** and hosted an online survey through July and August 2007. Input was solicited from the sectors represented at the Council table, and the general public was invited to participate in the process.

The workbook and online survey received a combined 245 responses and illuminated both opportunities to improve the strategy and areas of concern. A summary of the comments received is included in ***Appendix A — What We Heard***.

The final recommendations put forward in this report are the result of careful consideration of the Alberta Water Council's ***2006 Review Report,*** public and sector input provided via the online survey and workbook, and the Council's own experiences in working with the ***Water for Life*** strategy during the past four years.

The Council felt that it was critical to understand how Water for Life strategy partners thought the strategy could be improved.

Key Themes

It is clear that the three goals and three key directions of the Water for Life strategy remain valid.

After gathering input and carefully considering the Alberta Water Council's *2006 Review Report*, it is clear that the three goals and three key directions of the ***Water for Life*** strategy remain valid.

As a result, the Council recommends that the three goals and three key directions continue to be supported by the Government of Alberta and all ***Water for Life*** strategy partners.

However, it is increasingly apparent that the three goals and three key directions are heavily interconnected. In other words, failure to make progress on any one goal or direction will increasingly impact our ability to advance the other goals and directions.

Failure to make progress on any one Water for Life goal or direction will increasingly impact our ability to advance the other goals and directions of the strategy.

Therefore, the Council recommends that while all three goals and directions continue to be supported, that more emphasis be placed on achieving the goal of ***Healthy Aquatic Ecosystems*** in an effort to energize the strategy's implementation as a whole.

The recommendations found in this report are not directly linked to any one of the strategy's original goals or directions because the recommendations each impact several goals and directions. Instead, the recommendations are grouped into two key themes that emerged from the public and stakeholder input:

- **Safeguard Our Water Sources**
- **Accelerate Action**

Given that the ***Water for Life*** strategy's three goals and three directions remain valid, these key themes and their supporting recommendations are intended to advance and energize the implementation of the ***Water for Life*** strategy, as a whole.

Safeguard Our Water Sources

Safeguard Our Water Sources provides a focus and promotes a conservation ethic to ensure the advancement and integration of all ***Water for Life*** strategy goals and directions.

This theme recognizes the following water facts:

- All users of the land and water impact the quality, quantity, and health of aquatic ecosystems. Fundamentally, one user's source water is another user's wastewater. In this context, the management of healthy water sources includes both natural water sources and flows returned to the system by previous users.
- The ***Water for Life*** goals cannot be implemented in isolation of one another. The three goals are interrelated and failure to make progress in the area of ***Healthy Aquatic Ecosystems*** will limit our ability to achieve the other two goals.
- The rapid pace of social, economic, and environmental change in Alberta has caused an immediate need to safeguard our water sources and ensure a commitment to all ***Water for Life*** goals.

FIGURE 3 The Alberta Water Council's view that action toward ***Safeguarding our Water Sources*** will accelerate all three ***Water for Life*** goals.

Accelerate Action

Accelerate Action focuses on acting on what we have learned during the first four years of ***Water for Life*** implementation. We need to act on what we have learned so far and work together through empowered and informed partnerships. Part of the vision of renewal is to re-energize the ***Water for Life*** partners to continue to build commitment to reaching the strategy's goals.

This theme recognizes the following:

- ***Water for Life*** goals are delivered through partnerships; therefore we need to provide support and certainty for our partners in order to advance implementation.
- ***Accelerated Action*** requires leadership and coordination within and across all ***Water for Life*** strategy partners and shared responsibility from all Albertans.
- It is imperative that the Government of Alberta maintains a leadership role in achieving ***Water for Life*** strategy goals and directions and to ensure water users remain compliant with existing legislation.

FIGURE 4 The Alberta Water Council's view that ***Accelerating Action*** will affect all three ***Water for Life*** key directions.

Recommendations:

Building from the key themes, the Alberta Water Council offers the following recommendations – or areas of focus or action – for future implementation of the ***Water for Life*** strategy.

Safeguard Our Water Sources

Recommendation: Address aquatic ecosystem degradation.

The ***Water for Life*** strategy commits that "Albertans will be assured that the province's aquatic ecosystems are maintained and protected." This commitment was strongly supported throughout consultations conducted during the development of the ***Water for Life*** strategy.

Despite efforts to date, the Council's ***2006 Review Report*** assessment of progress toward achieving healthy aquatic ecosystems states, "…it will not be completed on schedule." This assessment is supplemented by renewal survey respondents, who were concerned "…that the aquatic environment in Alberta is being slowly and steadily compromised" (***What We Heard***).

To date, work has focused on cataloguing and understanding human impacts on Alberta's aquatic ecosystems. This is important and complex work. However, the Council believes there is a real opportunity to refocus our current efforts and take action to address aquatic ecosystem degradation.

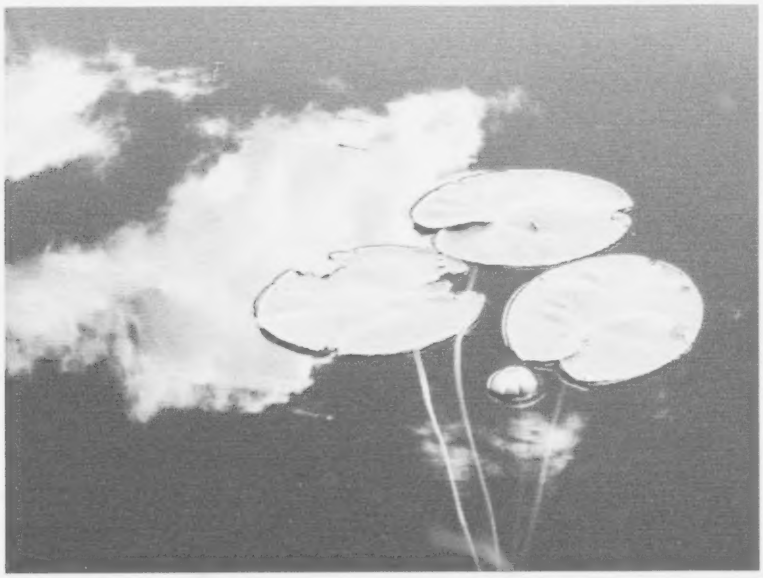
We can take immediate action, using our existing information, resources, and legislation, to address the degradation of our aquatic ecosystems. Where such information is absent or outdated, the ***precautionary principle***[1] can be applied to future management decisions to ensure the long-term maintenance of aquatic ecosystem health. We can also begin to restore the functions of our aquatic ecosystems where our activities have already degraded their capacity and integrity.

When applied in coordination among all partners, there is a real opportunity to advance the goal of ***Healthy Aquatic Ecosystems***.

"The Alberta Water Council believes that Albertans would welcome a high-priority, responsible and participatory approach to protection measures" (*2006 Review Report*).

"The Alberta Water Council believes that Albertans would welcome a high-priority, responsible, and participatory approach to protection measures."

1 *Precautionary principle* means a lack of knowledge and understanding should not be used as a reason for allowing action that risks serious or irreversible harm to the public good, including the environment, and the burden to prove no harm falls on those advocating the action (Mitchell 2002, EC 2001, Montague 2005).



Safeguard Our Water Sources

Recommendation: Integrate water and land management.

Integrated management is a central tenet of the ***Water for Life*** strategy:

"Albertans must work together to set objectives for the watershed, identify issues, monitor the condition of the watershed and continuously adjust their use of water and activities on the landscape that affect the water" (***Water for Life***).

Nearly every water source in Alberta is affected by human activity. Therefore, Albertans must be assured that the quality and quantity of our source waters (both surface and groundwater) are maintained for all uses, including drinking water, ecosystem needs, and municipal and industrial uses.

The Council sees integration as a way to support the safeguarding of our water sources, assist with watershed planning, and understand the cumulative impacts of development on surface and groundwater resources.

We can no longer practically manage these resources in isolation. As a result, we will need to integrate the ***Water for Life*** strategy with the province's ***Land-use Framework*** and other strategies, to enable a comprehensive and holistic approach.

We must adopt a "source-to-use" conservation ethic that recognizes and reduces the downstream effects of our activities. In order to do this, we must recognize and accept that water quality and quantity objectives are inextricably linked to land use decisions in watersheds and vice versa.

The provincial government is in the best position to provide leadership and direction for all partners to ensure the coordination and integration of water and land management strategies, policies, plans, and actions.

We must recognize and accept that water quality and quantity objectives are inextricably linked to land use decisions in watersheds and vice versa.

Safeguard Our Water Sources

Recommendation: Create, enhance and use innovative tools and best practices.

The ***Water for Life*** strategy states that all Albertans will "have the knowledge and tools necessary to make effective management decisions."

The unpredictability of our water supply, combined with our growing knowledge of our activities' effects on water quality, quantity, and ecosystem function, requires us to continually improve our approaches to water management and "develop new and innovative tools and capabilities for managing supply and demand" (***2006 Review Report***).

Our water management system must be responsive and able to adapt to new situations, such as climate change, in order to meet present and future environmental, social, and economic needs.

Our water management system must be responsive and able to adapt to new situations, such as climate change, in order to meet present and future environmental, social, and economic needs.

This requires the application of mechanisms or tools that allow improved management decisions to achieve our environmental outcomes.

We must apply broad-based best practices that apply to all sectors and users as well as continue to create and enhance our management tools (e.g., technical, regulatory, and social and economic marketing tools) for water conservation, groundwater allocation, water transfer, and use.

We must continually strive to enhance our suite of tools and management practices so we can develop innovative solutions that support our shared responsibility to safeguard our water sources.

In other words, as Premier Ed Stelmach said in his ***Address to Albertans*** in October 2007, we must continue "working with industry to find creative, innovative solutions that we can implement today to preserve our environmental heritage."

Accelerate Action

Recommendation: Clarify roles, responsibilities and accountabilities.

Input received through the renewal process confirmed that partnerships are the best vehicle for moving the ***Water for Life*** strategy forward and that they should continue to be supported. Indeed, partnerships are considered one of the cornerstones of the strategy and are crucial for engaging all interested Albertans in water issues across the province.

According to the Alberta Water Council's ***2006 Review Report***, a foundational piece that defines "the mandate, capacity, authority, and accountability of the partners, under a revised shared governance framework" is critical to the success of partnerships and planning. Without this clarity, partnerships can become less active, and ultimately, ineffective.

One of the common topics heard throughout the ***What We Heard*** process was that this clarity around roles, responsibilities, and accountabilities, is vital for maintaining effective partnerships in Alberta.

Furthermore, as we evolve towards a broad-based approach with technical, regulatory, and social marketing tools, it is imperative that we understand the scope and intent of our management tools (e.g., Watershed Management Plans) and our roles and responsibilities relative to those tools.

Additionally, we heard that predictable, adequate funding is necessary for effective partnerships. Stakeholder and public input clearly indicated resources need to include long-term, sustained funding, in addition to project-based resources.

Therefore, specific clarification and enhancement is required to define leadership, assurance, compliance, and decision-making roles within government and across all ***Water for Life*** partnerships. As well, there is a need to ensure that water partners have the on-going and sustained resources they require to complete their work.

The Alberta Water Council is currently undertaking a project to define a ***Water for Life*** strategy shared governance framework. This recommendation is intended to reinforce the need for this clarity of roles and energize commitment to this project.

Partnerships are considered one of the cornerstones of the Water for Life strategy. Clarification and enhancement are required to define the leadership, assurance, compliance, and decision-making roles within government and across all *Water for Life* partnerships.

Accelerate Action

Recommendation: Enhance data collection, analysis, and reporting.

The ***Water for Life*** strategy states: "Albertans will have the knowledge needed to achieve safe drinking water, efficient water use, and healthy watersheds."

And while the Council's ***2006 Review Report*** identifies knowledge and research as a "key strength" of the strategy, input gathered through the ***What We Heard*** process, via the online survey and workbook, indicated that "on-the-ground" managers are sometimes frustrated when trying to access this knowledge. For example, renewal survey respondents indicated that "water users are not well-informed about water and the aquatic environment or what they can do to conserve and protect them" and that "research and technology support is unable to sustain the planning envisioned by the ***Water for Life*** strategy."

There is no question that knowledge is the most critical element in our ability to manage water effectively.

There is no question that knowledge is the most critical element in our ability to manage water effectively.

However, the availability, quality and accessibility of data continue to be of concern, despite improvements in our knowledge and research.

An enhancement of the collection of baseline water (surface and groundwater) and ecosystem information coupled with analysis, interpretation, and reporting tools will promote and enable informed water and land use management decisions, for now and into the future. Future efforts should be taken to ensure water data and information can be integrated with air and land information.

The capacity to develop Alberta's knowledge and information is also dependent upon expanding our pool of highly qualified people now and into the future, and efforts need to be made in this area in the short-, medium- and long-term.

Accelerate Action

Recommendation: Expand public awareness programs and build shared commitment.

Fundamental to any effort to understand and safeguard our water sources is the premise that key information should be shared with all water and land users.

The Cows and Fish program, a non-profit education organization that provides public awareness about human impacts on riparian environments says it best when it states: "Being informed helps people make good decisions!"

The concept of shared responsibility — a core principle of ***Water for Life*** — requires that ***everyone*** understand how his or her actions impact the watershed.

In order to make informed choices, it is vital that both individuals and organizations have access to quality information, which in turn leads to improved understanding, and development of a water stewardship ethic.

Progress, to date, under strategic public awareness programs has been fragmented among a number of modest initiatives. There is a need and opportunity to advance public awareness, commitment, involvement, and support by building a comprehensive approach to water and water source awareness and education.

This is part of a long-term commitment towards building a change in public behaviour, and as a result, will ultimately help safeguard our water sources.

Being informed helps people make good decisions.

Renewal and Resourcing

Adequate, reliable resourcing must be in place to ensure the Water for Life strategy achieves its stated goals.

Albertans' expectations of the ***Water for Life*** strategy are very high. During our public and sector engagement, there was strong and consistent feedback that adequate, reliable resourcing must be in place to ensure the ***Water for Life*** strategy achieves its stated goals. Necessary resources for renewing and revitalizing the strategy include information, qualified people, leadership, and reliable, sustained funding. The themes and recommendations in this report identify areas where a renewed and increased focus will have the most impact; therefore particular attention should be paid to the resources necessary to support those areas.

A key theme in the ***What We Heard*** process was the need for certainty surrounding predictable and adequate funding. Renewal survey respondents noted that "…sustainable, long-term funding and capacity are needed to achieve the ***Water for Life*** objectives." In particular, partnerships require multi-year funding certainty in order to develop, implement, and monitor their initiatives and other longer-term projects. Human resources, information, and overall capacity to complete their tasks were also of concern. The role of partnerships, overall, was viewed by respondents as being of critical importance in moving the strategy forward.

The Government of Alberta should focus their attention and resources on the key areas identified in this document to ensure resources are in place to achieve them and the strategy, as a whole, can advance. Focusing resources and putting true 'muscle' in a few, strategic areas will most effectively advance the strategy as a whole.

Conclusion

The Alberta Water Council feels that over the past four years, the ***Water for Life*** strategy has proven to be effective. It continues to be an important strategy for better managing and sustaining Alberta's water supply, both for today, and future generations.

Building on the Council's on-going monitoring and assessment of progress toward implementing the ***Water for Life*** strategy, the recommendations contained in this report are aimed at refreshing or "renewing" the strategy to help focus implementation in key areas over the next few years.

To that end, and in conclusion, it is important to summarize and stress the following:

Water for Life is important.

The goals and the directions contained in the original ***Water for Life*** strategy remain relevant to Albertans. The Government of Alberta and its partners need to re-state their commitment to support the outcomes of the strategy, and to stress the importance of water to all Albertans.

We need empowered partners.

Water for Life cannot be implemented by any one group; therefore, partnerships continue to be seen as critically important for the strategy's advancement. The Government of Alberta needs to re-state its commitment to action through partnerships and ensure that partners are empowered to take action.

Focus on strategic areas.

In order to maximize the return on Albertans' investments, resources and adequate financial support should be focused in the areas outlined in this report in order to most effectively and efficiently advance the ***Water for Life*** strategy. These areas of renewed focus include:

Safeguard our Water Sources

- Address aquatic ecosystem degradation.
- Integrate water and land management.
- Create, enhance and use innovative tools and best practices.

Accelerate Action

- Clarify roles, responsibilities and accountabilities.
- Enhance data collection, analysis and reporting.
- Expand public awareness programs and build shared commitment.

Renewal and Resourcing.

Albertans' expectations of the ***Water for Life*** strategy are very high. During our public and sector engagement, there was strong and consistent feedback that adequate, reliable resourcing must be in place to ensure the ***Water for Life*** strategy achieves its stated goals. Resources necessary to renew and revitalize the strategy include information, qualified people, leadership, and reliable, sustained funding. The themes and recommendations in this report identify areas where a renewed and increased focus will have the most impact; therefore particular attention should be paid to the resources necessary to support these areas.

In conclusion, the Government of Alberta deserves credit for defining and undertaking ***Water for Life***.

The Council believes that renewal of the strategy is timely and can realistically fulfill the vision of the *2006 AWC Review* report that states:

> ***"Alberta has an opportunity to transform its water management challenges into world class solutions. The strategy envisions policies and resources far beyond ad hoc decisions and incremental change. . . . (however) success will depend on focus, innovation, balanced social values and a growing appreciation of the value of water as a scarce resource."***

Appendix A

What We Heard

Summary of Responses to Engagement
July – August 2007

October 5, 2007

This report was prepared by MPA Public and Government Affairs (a private consulting company contracted to analyze and report on the input received from the Renewal Engagement process).

Context

The ***Water for Life*** strategy was adopted by the Cabinet in November 2003.

In spring 2007, the Minister of Environment requested that the Alberta Water Council lead renewal of the ***Water for Life Strategy***. The renewal is not a "re-do" of the original Strategy. Rather, it seeks to adjust and if necessary expand the intent of the Strategy to ensure responsiveness to emerging issues and current information.

To assist in developing recommendations the Council sought information, views and opinions of Albertans. The input gathered through the engagement process will inform the Alberta Water Council's recommendations, which will be presented to the Minister of Environment early in 2008.

> *This "What We Heard" report summarizes input from participants in the engagement process and does not represent the view of the Alberta Water Council.*

Approach

The engagement process utilized a workbook and online questionnaire hosted on the Alberta Water Council website through July and August 2007. Alberta Water Council members undertook an extensive process of soliciting feedback from their sectors, resulting in 245 submissions from individuals or recognized organizations and agencies. All sectors on the Alberta Water Council were represented in these responses with the exception of First Nations which were engaged by Alberta Environment.

Responses were submitted directly to a consultant team. A three-step process was used to analyze the information and produce this report. The first hundred submissions were analyzed to create a core set of common themes, and the remaining submissions confirmed and expanded the common themes. Finally, the input was synthesized into a summary format to consolidate information.

> *The analysis focused on identifying and understanding respondents' points of view. No attempt was made to determine the factual accuracy of these viewpoints or to resolve apparent contradictions.*

The ***What We Heard*** report summarizes major themes. Where more detail was provided in the submissions, it will be taken into account by the Steering Committee and Project Team overseeing the renewal of the strategy when developing the final recommendations for submission to the Alberta Water Council.

Executive Summary

The major themes related to concerns and actions suggested by respondents. They can be summarized as follows.

Concerns Perceived by Respondents

Respondents expressed concerns about water and the aquatic environment in Alberta, namely,

- That the aquatic environment in Alberta is being slowly and steadily compromised,
- That Alberta is facing future water shortages,
- That water users, individual and industrial, are not well informed about Alberta's water resource or what they can do to conserve and protect it.

Actions Suggested by Respondents

Respondents felt that the ***Water for Life Strategy*** was a positive step and remains a valid framework, but that adjustments are needed to ensure it remains dynamic and responsive to emerging challenges. Accelerated implementation is required to meet the intent of the ***Water for Life Strategy***.

Respondents called for additional effort concerning key aspects of the ***Water for Life Strategy***, namely,

- Additional resources to meet the strategic intent of the ***Water for Life Strategy***,
- Statements of goals, actions, and targets for the ***Water for Life Strategy*** implementation,
- Clarification of authority, roles, responsibilities and accountabilities in the shared governance, partnership model,

- Quicker movement towards environmental protection,
- Review and likely revision of regulatory framework with impact on the intent of the ***Water for Life Strategy***,
- Enhanced knowledge and information creation and dissemination,
- Creation of public awareness and education.

Overview of Themes

The themes are based on 245 submissions. The five themes from the engagement are grouped under the headings of Concerns and Actions.

Concerns Perceived by Respondents

Theme #1: That the aquatic environment in Alberta is being slowly and steadily compromised.

Theme #2: That Alberta is facing future water shortages.

Theme #3: That water users, individual and industrial, are not well informed about Alberta's water resource or what they can do to conserve and protect it.

Actions Suggested by Respondents

Theme #4: That ***Water for Life Strategy*** was a positive step and remains a valid framework, but adjustments are needed to ensure effective implementation.

Theme #5: That accelerated implementation is required to meet the intent of ***Water for Life Strategy***.

Concerns Perceived by Respondents

Themes #1, #2 and #3 describe concerns about the natural, social and economic environment.

Theme #1: That the Aquatic Environment in Alberta is being Slowly and Steadily Compromised

Many were of the opinion that the aquatic environment in Alberta is under threat, and already showing signs of compromise.

Sub Theme Concerns over pollution of surface water.

There was concern that human activity is polluting rivers, streams, and lakes. Some damage is already visible. The concern was referenced by,

- Eutrophication and algae growth, which affect lakes,
- Pollution from industry,
- Poor road construction and use of offroad vehicles, which affect rivers and streams,
- Industrial spills,
- Residential wastewater discharges which can contain pharmaceuticals,
- Occasional pollution from septic systems,
- Need for better protection.

Sub Theme Concerns over pollution of groundwater.

There was concern that human activity is polluting groundwater. This was referenced by,

- Pollution from industry, including coalbed methane, oilsands and agricultural operations,
- Limitations on groundwater data which affect the ability to rationalize planning for new developments,
- Need for better protection.

Sub Theme Concerns over threats to the aquatic environment.

There was concern over threats to wetlands, riparian areas, and the aquatic environment. Wetlands are disappearing. This concern was referenced by the need for,

- A current wetlands policy,
- A consensus on the definition of a "healthy aquatic ecosystem",
- Incentives to protect wetlands on private property,
- Limits to shoreline developments, which affect habitat,
- Restoration of threatened wetlands,
- Alignment of land development and aquatic habitat preservation,
- Attention regarding non-point sources, cumulative impacts, and the affects of reduced water quantity,
- Better protection.

Sub Theme Development takes priority, sometimes at the expense of the environment.

There was concern that environmental consequences are usurped by industrial or residential developmental needs. A better balance is needed. The current practice is not sustainable over the long-term.

Sub Theme When protective policies are in place, monitoring and enforcement appear to be insufficient.

There was concern that compromise of the natural environment continues even when a reasonable assumption is that policies exist to protect it. Some thought the problem may be limited enforcement.

Theme #2: That Alberta is Facing Future Water Shortages

A pervasive sense that Alberta is moving in the direction of future water shortages underscored many of the points of view heard in the engagement.

Sub Theme Growth in Alberta's population and economy will affect water supply.

The concern was referenced by,

- Urban growth, with effects on source and use of water,
- Growth in rural residential development of those not served by municipal water sources, with effects on withdrawal of groundwater,
- Growth in industrial demand, and in use of water for some industries, especially for the oilsands and enhanced oil recovery,

- Growth in logging, due to the pine beetle infestation, with effects on water catchment,
- Possible increases in contamination of groundwater, with effects on supply,
- Loss of wetlands, with effects on supply,
- Pressure for instream dams, with effects on aquatic habitat and downstream flow.

Sub Theme Concerns related to allocations and priorities and recent events affecting water supply.

This concern also encompassed licensing and was referenced by,

- The moratorium on new allocations in the South Saskatchewan River Basin,
- Increasing requests for water transfers, mostly intra-basin,
- Issuance of licenses without understanding of implications of the outcome of the project,
- Issuing development permits before water licenses have been secured,
- Over-allocation of surface water rights, example, to large municipalities, which leads to "hoarding" of license capacity and removes any incentive to conserve.

Sub Theme Climate change will contribute to water shortage.

This concern was referenced by,

- Changing weather patterns and effects on glaciers
- Need to prepare for and adapt to possible effects of climate change,
- Need for more storage capacity,
- Concerns about the increasing impact on Alberta of the diversion of water to the United States under the North American Free Trade Agreement (NAFTA).

Sub Theme The situation regarding future water shortages is different in northern and southern Alberta.

The south has growing numbers of people and less unallocated water. The north has more unallocated water and growing industrial demand with oilsands development. The need to manage by watershed and not by what may be a public misconception that the whole province is experiencing water shortages was advised.

Theme #3: That Water Users are not well Informed about Water and the Aquatic Environment or What They Can Do to Conserve and Protect Them

There was a concern that many publics, individual and industrial, do not understand the nature of Alberta's water resource nor its dynamics. They are still taking water for granted as a permanent part of the environment. Information is there for involved stakeholders, should they look for it, but it hasn't reached the wider public.

Sub Theme People often take water for granted as an infinite resource.

There was the opinion that the public do not understand,

- The value of water,
- That it is finite,

- That it has a cost attached to it,
- That the environment doesn't just bounce back after all resources are extracted,
- That there really is a looming problem with supply,
- What to do about it – individually or corporately.

Sub Theme A positive trend is that people are taking notice of water and the need for good management.

Participants saw indications of the beginnings of change. A new consciousness of the importance of water is appearing. The large cities in particular are promoting water conservation for individuals. Awareness of climate change is contributing to awareness of water.

Sub Theme Conservation measures often come with costs attached.

There was concern that conservation measures, individual or industrial, often come with costs attached which implies a reluctance to use them. Widespread conservation measures are slow in coming. If people don't understand the value of water, pay little or nothing for it, and have to pay to conserve, they are not motivated to conserve.

Actions Suggested by Respondents

Themes #4 and #5 address actions which might be taken in response to concerns. Theme #4 addresses strengths and limitations of the ***Water for Life Strategy***, and Theme #5 focuses on solutions.

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*Theme #4: That the **Water for Life Strategy** was a Positive Step and Remains a Valid Framework, but Adjustments are Needed to Ensure Effective Implementation*

The ***Water for Life Strategy*** was widely seen as a strong beginning, but there are factors limiting its effectiveness.

Sub Theme Water for Life Strategy has been slow in moving from planning to action.

There was the opinion that the ***Water for Life Strategy*** was reasonably strong in its intentions and design, but more vigorous implementation is needed. Participants indicated that their opinion was reinforced by some of the recommendations in the Alberta Water Council's 2005 – 2006 review of ***Water for Life Strategy*** implementation which speaks of the need to energize portions of the strategy. The opinion that the Strategy needs to move from planning to action was referenced by the observations that,

- Industrial development continues to encroach on water resources,
- Public awareness of the ***Water for Life Strategy*** is not strong,
- Strong targets which would motivate Albertans are not evident,
- Data to properly inform and assess actions are limited.

Sub Theme The main barriers to Water for Life Strategy progress are seen as unclear authority and inadequate resources.

Two major barriers identified to effective progress in the implementation of the ***Water for Life Strategy*** were unclear authority and accountabilities and inadequate capacity, funding and human resources.

Sub Theme There is a strong need to integrate land use and water policies.

There was a strong opinion that land and water should be managed together. If the two are not aligned, water management may be ineffective. Aspects of this concern included,

- The growth in municipalities making combined land and water management even more urgent,
- The need to align federal, provincial and municipal planning with watershed boundaries,
- Reluctance of volunteers to engage vigorously in water planning when the Land-use Framework is still being developed.

Sub Theme The principles of the* Water for Life Strategy *are generally non-controversial with the exception of First in Time First in Right (FITFIR).

There was the opinion that FITFIR acts as a barrier to effective water management and would benefit from re-examination in light of public good. This is referenced by,

- Limited ability to assess water allocation decisions in light of changing markets,
- FITFIR is at cross purposes with the principle of Albertans using water more effectively and efficiently as well as the *Water for Life Strategy* direction of conservation.

There were those who strongly supported maintaining FITFIR.

Sub Theme The need for more water monitoring.

There was the opinion that there is a need for more water monitoring to assure compliance with water policy and regulation.

Sub Theme The idea of a partnership model is supported but unclear policy guidelines and strain on volunteer resources hamper operations of the watershed partners.

The authority given to Watershed Planning and Advisory Councils (WPACs) was said to be unclear. WPACs are volunteer operations. There were concerns with burnout due to demands exceeding the capacity of volunteers. Funding, information, technical and possibly administrative support are needed for the WPAC partnership approach to be sustainable.

Even though there is general support for the concept of a partnership model, inherent difficulties were mentioned. These included,

- The difficulty of achieving consensus when working with multiple stakeholder interests,
- The pace of progress with watershed planning,
- The need for government to continue to govern while seeking good advice from such groups.

Sub Theme The regulatory framework for water management is not strong enough.

Arguments for this point of view took the position that Alberta needs to make clear policy goals for environmental practice and support related action in legislation. References were made to,

- Pollution from industrial activity which is allowed to continue,
- Pollution from development within riparian habitat,

- Need to change the emphasis so that water management is prior to land management, rather than the reverse,
- Barriers to environmental control caused by the current system of licensing,
- Neither the Water Act nor the Environmental Protection and Enhancement Act giving relevant authorities the ability to plan or regulate all activities potentially affecting aquatic ecosystems.

Sub Theme Research and technology support needs strengthening.

Participants acknowledged and applauded the creation of the Alberta Water Research Institute. However, there was a concern that research and technology support is unable to sustain the planning envisioned by the *Water for Life Strategy*. This was referenced by,

- The need for more mapping of quality and quantity of groundwater, with effects on ability to understand outcomes of projects. What information is available is usually on too large a scale to be useful for small project planning,
- The need for more socio-economic data on outcomes of water projects,
- The need for more data on cumulative effects of projects.

Theme #5: That Accelerated Implementation is Required to Meet the Intent of the ***Water for Life Strategy***

The material in this section is a compilation of strategies, directions or actions suggested to strengthen the *Water for Life Strategy*.

Sub Theme Strategy and Governance

Increase direction and leadership.

Specific suggestions included,

- Create clear goals, benchmarks, measurements, and targets to allow meaningful assessment of impact and effectiveness,
- Understand the need for enforcement as well as softer approaches. Attitudes take too long to change to rely only on voluntary compliance,
- Increase role of scientific data in decision-making,
- Resolve accountabilities in the governance structure. In particular, clarify role of the province in relation to ultimate responsibility for achieving the strategy's goals,
- Clarify policies on subtopics such as wetlands, stored water, instream flow and protection of water sources,
- Integrate water source protection explicitly into strategy,
- Require renewed emphasis on the leadership role of the Alberta Government,
- Enhance development of highly qualified people (technical & strategic) amongst all partners.

Strengthen legislation.

Specific suggestions included,

- Be explicit that economic development must be aligned with a finite environmental capacity. Make this a fundamental principle flowing through related legislation or regulation. Create legislation that protects watershed and ecosystems by stopping the causes of damage,
- Adopt a policy of "no net loss" by banning uses which either withdraw water from the cycle or render it unusable,
- Align relevant pieces of legislation such as the Water Act and the Municipal Government Act to reflect the strategic intent of the ***Water for Life Strategy***,
- Establish guidelines to integrate precaution and consideration of uncertainties into the regulatory decision-making process,
- Establish a regulatory framework for source water protection,
- Develop a long-term plan to systematically establish aquatic ecosystem objectives,
- Develop a comprehensive provincial strategy to address groundwater.

Strengthen the partnership network.

The Watershed Planning and Advisory Councils (WPACs) and Watershed Stewardship Groups (WSGs) are volunteer organizations. Realistic expectations are needed. Specific suggestions included,

- Create clear policy regarding authority, roles, responsibilities and accountabilities of partners,
- Create clear guidelines and mandatory requirements for watershed plans; ensure these plans have scientifically based objectives and priorities. Encourage substantive connections between: surface and ground water, land and water, water quality and quantity,
- Complete the provincial watershed management plans,
- Facilitate groups to help partner groups organize themselves,
- Provide the data and technical support which partners need to manage at the watershed level,
- Assist partners with funding for administrative support,
- Increase and improve communications with the Alberta Water Council.

Sustainable long-term funding and capacity.

There was the opinion that sustainable, long-term funding and capacity are needed to achieve the ***Water for Life Strategy*** objectives. If protection of Alberta's water is viewed as due diligence in comparison to benefit received from water, then the implementation of the Strategy may be significantly under resourced. The needs included,

- Support for the partnership network,
- Support for knowledge creation, monitoring and statistical data,
- Possible incentives for conservation, wetlands and aquatic habitat protection,
- Public education and awareness-building.

Review the membership of the Alberta Water Council.

Suggestions included,

- Ensure it has enough knowledgeable, neutral members with no interest except protecting Alberta's water,
- Have representation from both the City of Calgary and the City of Edmonton.

Take action to improve the effectiveness and efficiency of government departments.

A suggestion was,

- Align policy and practice of all departments dealing with water, including Environment, Health and Wellness, Infrastructure and Transportation, Sustainable Resource Development, and Agriculture and Food.

Improve knowledge creation, monitoring and statistical data.

Many specific suggestions were made. A selection included,

- Enhance and coordinate the water information, knowledge gathering and reporting system. Information areas included: groundwater, surface water, water quality and quantity, and healthy aquatic ecosystems,
- Report industry water diversion and return, as well as amounts not returned,
- Provide basin-wide modeling tools that identify emerging factors that could compromise raw water quality,
- Collect general water-use data from large users as well as household and traditional agricultural users. Submission should be timely and mandatory,
- Support the Alberta Water Research Institute,
- Communicate with other jurisdictions, to avoid overlaps,
- Develop and / or import technologies which use less water or use non-potable sources when appropriate,
- Study cumulative effects, including socio-economic impacts,
- Expand mapping of aquatic resources in Alberta, especially groundwater.

Take action to address the potential effects of climate change and / or weather variability.

Pursue understanding of how climatic variation may affect water quantity, quality and the health of aquatic ecosystems and incorporate actions to address this understanding.

Align water management with land use planning.

While some felt this is an important goal, it was acknowledged that it does increase the complexity of planning tasks and may challenge the partnership model. As well, there would be difficulties finding acceptable boundaries when three levels of government and watershed definitions must be considered; achieving consensus with large groups can be difficult. Specific suggestions included,

- Align water management policy with current work on the Land-use Framework,
- Align with the Municipal Government Act so that residential, commercial and industrial development must take account of water.

Address special difficulties confronted by small municipalities or rural areas.

These included,

- In some cases, cost of water supply pipelines to smaller communities,
- Recruiting and retaining qualified staff to operate water treatment systems.

Address difficulties in allocations and priorities.

These included,

- Investigate ways of using surplus allocations (e.g., from large municipalities), possibly by redistributing throughout the province,
- Review the apparent contradictions between the First in Time First in Right (FITFIR) principle and the common good,
- Provide direction to Alberta Environment directors, through approved Watershed Management Plans, as to which future uses should be issued allocations, the terms and conditions under which allocations should be issued, uses that should be denied, and guidance for new allocations in those basins where allocations have not yet been capped,
- Strengthen or put in place new legislation that promotes water markets and leads to water transfers that support the principle of economic sustainability,
- Facilitate transparent water transfers and reduce transaction costs for buyers and sellers, while protecting rights of other water users and instream flow allocations.

Accelerate movement to regional water management systems.

This could reduce the problems of small municipalities and rural areas in keeping clean water supplies, and possibly facilitate intra-basin transfer arrangements.

Consider creating a new agency responsible for water management.

Some believed a dedicated agency may accomplish the work more efficiently than attempting to link separate government departments. However, others argued for a holding period to give the ***Water for Life Strategy*** time to mature. The energy required to make any structural changes could delay action needed to advance critical ***Water for Life*** goals.

Sub Theme Preparation for Future Water Shortages

Address future water shortages.

Many solutions were suggested. They included,

- Storage, which might include reservoirs or natural storage in wetlands,
- Increase use of non-potable water for non-essential uses,
- Redistribution of water throughout the province.

Sub Theme Communications, Public Awareness and Education

There was the opinion that a culture shift in thinking is needed. Water can no longer be taken for granted as an infinite, ever-available resource. It needs to be understood as a finite resource requiring management.

Strengthen efforts to inform and educate the public.

Be proactive in reaching out. Tell people,

- About the state of Alberta's water supply and habitat, using simple metrics,
- About the issues affecting Alberta's water,
- About the vulnerable condition of Alberta's water supply and habitat,
- That action needs to be taken to protect it,
- That they have a role to play, what that role is, and how they could carry it out.

Use many channels to reach people.

Suggestions,

- Continue to develop and maintain an excellent web portal,
- Use media, schools, partnerships and leaders to disseminate information.

Strengthen communications between the partners involved within the *Water for Life Strategy*.

Advice,

- Ensure that the Alberta Water Council members are connected to their sectors,
- Ensure that the watershed partners are connected to the Alberta Water Council.

Sub Theme Conservation

Expressions of the need for more public awareness and the need for conservation overlapped. Nonetheless, some suggestions specific to increasing conservation were provided.

Address conservation issues through economics.

Specific suggestions included,

- Give water a commodity value,
- Charge in relation to its commodity value,
- Use the tax system to incent reduced water use.

Facilitate conservation by users, individual or commercial / industrial.

Specific suggestions included,

- Provide guides for users to do their own water audits,
- Promote a variety of conservation tools to individuals.

Appendix B

Members of the Alberta Water Council

Broad Category	Directors
Industry	
Chemical & Petrochemical	Al Kennedy
Forestry	Keith Murray
Irrigation	Jim Webber
Livestock	Larry Nolan
Mining	Judy Smith
Oil & Gas	Kevin Stashin
Power Generation	Mike Kelly
Non-Government Organization	
Environmental	Danielle Droitsch
Environmental Law	Jason Unger
Fishery Habitat Conservation	Ron Pearson
Lake Environment Conservation	Jay White
Watershed Planning & Advisory Councils	Bill Berzins
Wetland Conservation	Jonathan Thompson
Wilderness	Carolyn Campbell
Other Government	
Federal	Tim Goos
First Nations (3 seats — Treaty 6, 7 and 8)	
Large Urban	Rob Pritchard
Métis Settlements	Gerald Cunningham
Rural	Bob Barss
Small Urban	Richard Quail
Government of Alberta and Provincial Authorities	
Alberta Agriculture & Food	John Donner
Alberta Economic Development Authority	Kim Sturgess
Alberta Energy	Joe Miller
Alberta Environment	Peter Watson
Alberta Health & Wellness	Alex MacKenzie
Alberta Sustainable Resource Development	Brad Pickering
Alberta Water Research Institute	David Hill

Renewal Project Steering Committee

Government of Alberta and Provincial Authorities	Joyce Ingram	Alberta Sustainable Resource Development
Industry	Kevin Stashin	Devon Canada
NGOs	Ron Pearson	Trout Unlimited

Renewal Project Team

Government of Alberta and Provincial Authorities	Scott Millar	Alberta Sustainable Resource Development
	Jamie Wuite	Alberta Agriculture & Food
Government (Large Urban)	Paul Fesko	City of Calgary
Government (Small Urban)	Kirk Popik	Alberta Urban Municipalities Association
Industry	Herb Wiebe	Mining-Alberta Chamber of Resources
	Bob Demulder (alternate)	Conoco Phillips Canada
	Nadine Barber	Oil and Gas – Devon Canada
	Richard Phillips	Irrigation-Bow River Irrigation District
NGOs	Meghan Beveridge	Environmental – Bow Riverkeeper
	Lindsay Telfer (alternate)	Sierra Club of Canada
	Mark Bennett	WPACs – Bow River Basin Council

ALBERTA WATER COUNCIL
Website: www.albertawatercouncil.ca